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environmental restoration project

A Department of Energy Environmental Cleanup Program

Environmental Restoration Project
Desk Instruction

For:

Completing the SMO Analytical Order and Field Paperwork Request

Los Alamos
NATIONAL LABORATORY
Los Alamos, New Mexico 87545

Revision Log

Revision No.	*Effective Date*	*Prepared By*	*Description of Changes*	*Affected Pages*
R0	04/17/02	Felicia M. Aguilar	New Desk Instruction	All

Completing the SMO Analytical Order and Field Paperwork Request

Table of Contents

Acronyms and Abbreviations

A3	Analysis and Assessment Focus Area
DI	Desk Instruction
ER	Environmental Restoration
ID	Identification
LANL	Los Alamos National Laboratory
PRS	Potential Release Site
QC	Quality Control
QP	Quality Procedure
QPPL	Quality Program Project Leader
SMO	Sample Management Office

Completing the SMO Analytical Order and Field Paperwork Request

1.0 PURPOSE

This desk instruction (DI) states the responsibilities and describes the process for completing the Sample Management Office (SMO) analytical order and field paperwork request spreadsheet on the Los Alamos National Laboratory (LANL) Environmental Restoration (ER) Project.

This request

- documents your requirements for analytical analysis on your samples,
- notifies SMO personnel and your Analysis and Assessment (A3) Focus Area data steward of your requirements,
- ensures that the appropriate SMO personnel and your A3 data steward review your requirements so that they are matched to the appropriate laboratory,
- enables analytical laboratories to be notified that your samples will be arriving, and
- provides the information needed to generate your sampling paperwork.

2.0 SCOPE

This DI is a guidance document and all ER Project users of ER-SOP-01.04, Sample Control and Field Documentation, implement and execute this process at least two weeks before sampling events occur for the ER Project.

3.0 TRAINING

3.1 All users of this DI shall train according to ER-SOP-01.04.

3.2 The **supervisor** monitors the proper implementation of this DI and ensures that relevant team members complete all applicable training assignments indicated in ER-SOP-01.04, in accordance with LANL-ER-QP-2.2, Personnel Orientation and Training.

4.0 DEFINITIONS

Note: A glossary of definitions is located on the ER Project internal homepage http://erinternal.lanl.gov/WritingGuide.shtml.

4.1 *Analytical charge code* — Charge code that the SMO uses for analytical work; it is not the field activity charge code. Contact your ER team leader for the appropriate charge code.

4.2 *As-collected values* — Actual sample descriptors based on the sample collected in the field.

4.3 *Planned values* — Field team leader's or ER team leader's best guess at the sample descriptors based on the sampling event planning document and knowledge of the site to be sampled

4.4 *Sampling event* — Discrete sampling activity to be executed. A field campaign may be made up of multiple sampling events.

5.0 RESPONSIBLE PERSONNEL

The following personnel are responsible for activities identified in Section 6.0 of this procedure.

5.1 A3 data steward

5.2 ER team leader

5.3 Requester

5.4 SMO personnel

6.0 PROCEDURE

The SMO analytical order and field paperwork request is an Excel workbook made up of worksheets that require population before a requester can initiate an analytical and paperwork request. The requester, sampling event, and sample-specific information are required. See Attachment A, Completing the SMO Analytical Order/Field Paperwork Request, for a flowchart of this process; Attachment B, Worksheet 1, General Request Info, for requester and general sampling event requirements; and Attachment C, Worksheet 2, Sample-Specific Analytical Request Information, for sample-specific analytical requirements.

Note: ER Project personnel may print paper copies of this supplemental desk instruction from the controlled-document electronic file located at http://erinternal.lanl.gov/home_links/Library_proc.shtml. Contact the author if text is unclear.

6.1 Populate the Workbook

The **requester** shall perform all the following activities.

6.1.1 Under the "Service Request" dropdown menu of the ER Internal web page located http://erinternal.lanl.gov/ select "SMO Request."

6.1.2 The SMO Order Analytical Order and Field Paperwork spreadsheet opens automatically; save the excel file to your harddrive.

6.1.3 Review the sampling event planning document that defines the sampling event that you will execute.

Note: If the specific information needed to complete an SMO analytical order and field paperwork request is not included in the planning document, coordinate with your ER team leader to assemble the required information.

6.1.4 Complete Worksheet 1, General Request Info (Attachment B).

Note: All information is required; it is used to prepopulate the "planned" values in the sampling paperwork, which may be updated during sample collection to reflect "as-collected" values.

6.1.4.1 Required Requester Information is specific to the person requesting the sampling paperwork:

- Date: date the request is being submitted.
- Name: person requesting sampling paperwork.
- E-mail: email address of person requesting sampling paperwork.
- Phone #: phone number of person requesting sampling paperwork.
- Z#: Z-number of person requesting sampling paperwork.

6.1.4.2 Required Sample Event Information is specific to the sampling event:

- Event Description: Identify the sampling event; include PRS and time period information (e.g., 1Qtr FY02, PRSs, wells, canyon, and technical area).
- Planning Document: List the title and LAUR number of the planning document for the sampling event.
- Focus Area: Use the pull down list to choose the focus area and focus area leader responsible for the sampling event.
- Analysis Charge Code: Fill in the appropriate charge code for the analytical work for this sampling event; your ER team leader can provide the code.
- ER Team Leader: Use the pull down list to choose the ER team leader responsible for the sampling event.

- Planned Field Start Date: Fill in the planned start date of the sampling event in the mm/dd/yy format.
- Planned Field End Date: Fill in the planned end date of the sampling event in the mm/dd/yy format.
- Field Subcontractor: Use the pull down list to choose the subcontractor executing the sampling event.
- Field Team Leader: Use the pull down list to choose the subcontractor field team leader responsible for the sampling event.

6.1.5 Complete Worksheet 2, Analytical Request Info (Attachment C), with sample-specific analytical request information required to submit your samples to the analytical laboratory.

6.1.5.1 Complete all applicable analytics columns; contact your A3 data steward or the SMO with questions.

Note: This information will be used to prepopulate the "planned" values in the sampling paperwork, which may be updated during sample collection to reflect "as-collected" values.

6.1.5.2 Sample Information Planned Values are required and (sample-specific information for this sampling event) are based on the sampling event planning document and knowledge of the planned-sample site.

Note: Each row in the spreadsheet represents a distinct combination of sample descriptors and analytical requirements. If multiple locations and samples have the same sample descriptors and analytical requirements, only one row in the spreadsheet needs to be completed.

- PRS and Well/Canyon: Enter the PRS, and the well or canyon that will be sampled.
- No. of New Location IDs Needed: Enter the previously assigned location ids for locations you plan to return to, or request a new location ID by indicating the number of new location IDs needed.
- No. of Sample IDs Needed: Indicate the number of new samples needed at each location. Unique sample identification numbers are assigned when the paperwork is generated.
- Top Depth: Enter the planned beginning depth of the interval to be sampled.

- Bottom Depth: Enter the planned end depth of the interval to be sampled.
- Depth Unit (ft, in, cm): Enter the depth unit of measurement for your sample interval.
- Location Type: From the Location_Type look-up table, choose the appropriate location type (based on the sampling event planning document and site knowledge) for the location to be sampled. Worksheet 3, Field Code Values To Print (Attachment 4), has all look-up tables associated with the worksheet and can be printed for reference in completing this request and can be used in the field to complete the sample collection logs.
- Field Matrix: From the Field_Matrix look-up table, choose the appropriate field matrix (based on the sampling event planning document and site knowledge) for the sample to be collected.
- Eval Class: From the Eval_Class look-up table, choose the appropriate evaluation class, formerly referred to as "media code" (based on the sampling event planning document and site knowledge), for the sample to be collected.
- Sample Tech Code: From the Sample_Tech_Code look-up table, choose the appropriate sampling technique code (based on the sampling event planning document and site knowledge) for the sample to be collected.
- Field Prep: From the Field_Prep look-up table, choose the appropriate field preparation method to be applied, in the field, on the sample to be collected.
- Field QC Type: From the Field_QC_Type look-up table, choose the appropriate field quality control (QC) type sample (based on the sampling event planning document and site knowledge) for the sample to be collected.

6.1.5.3 The Routine Analytics section of the worksheet lists the routine analytical suites that you may need for your samples. In the General Chemistry column fill in methods/analytes from Worksheet 4, Analytical Methods & Analytes, for requests other than the standard suites shown under the "Organics," "Inorganics," or "Radionuclides" headings. Put any additional requirements or instructions in the Requests/Instructions column.

Note: Worksheet 4, Analytical Methods & Analytes (Attachment E), lists routine analytics by suite type, suite, order code, test methods, preservatives, and detection limits.

6.1.5.4 Put an "X" in the In the Organics, Inorganics, and Radiochemistry columns for the standard suites that you are requesting.

- To modify one of the standard suite's standard analyte lists, put an "X" in the Modify column and provide any additional requirements or instructions in the Requests/Instructions column.
- To request a suite or analyte not shown, put an "X" in the Other column and provide any additional requirements or instructions in the Requests/Instructions column.

6.1.5.5 To request specialty analyses, put an "X" in the Special Analytics column and provide any additional requirements or instructions in the Requests/Instructions column.

Note: Specialty analyses are analytes or suites that are not listed on Worksheet 4, Analytical Methods & Analytes. Therefore no laboratory currently is under contract to provide the analysis; special arrangements will need to be made.

6.1.5.6 In the Requests/Instructions column, list any additional requirements, instructions, or information that will help the SMO order your analyses.

6.2 Save the Excel File

The **requester** saves the Excel file, with a new name, and emails it to SMOOrderRequest@lanl.gov; receipt of this file triggers the following steps:

6.2.1 The **A3 data steward** starts the process of setting up a new sampling event in the information management system and generating your draft sampling paperwork.

6.2.2 **SMO personnel** start the process of generating ordering requests for the analytical laboratories.

Note: If any questions arise, the A3 data steward or SMO personnel will contact you.

6.2.3 The **A3 data steward** generates the draft sampling paperwork, which is provided to the requester for review and approval; the requester is asked to pick up the draft paperwork from either the A3 data steward or the SMO.

Note: This is the requester's opportunity to request changes to the sampling event.

6.2.3.1 If no changes are necessary, circle "No" on on the sampling paperwork approval form (Attachment F) and sign in the space provided.

Note: The signature documents concurrence with the draft paperwork and the request for final printed paperwork based on the draft paperwork.

6.2.3.2 If changes are necessary, circle "Yes" and summarize the changes necessary in the space provided and return the sampling paperwork approval form and the draft paperwork to your A3 data steward.

Note: Final sampling paperwork is not generated until the signature is acquired on the sampling paperwork approval form.

6.2.3.3 If changes are not requested but are deemed necessary after the final sampling paperwork is generated, this sampling event is canceled in the information management system, and a new event requires creation.

Note: This may require that a new SMO analytical order and field paperwork request spreadsheet be submitted; it is determined on a case by case basis.

6.2.3.4 **SMO personnel** generate the final sampling paperwork and pull the appropriate sampling containers.

6.2.4 The **requester** picks up the sampling event paperwork and containers at the SMO.

7.0 LESSONS LEARNED

During the performance of work, **ER Project personnel** shall identify, document, and submit lessons learned, as appropriate in accordance with LANL-ER-QP-3.2, Lessons Learned, located at http://erinternal.lanl.gov/home_links/Library_proc.shtml.

8.0 RECORDS

This desk instruction generates no records.

9.0 REFERENCES

ER Project personnel should read the following documents located at http://erinternal.lanl.gov/home_links/Library_proc.shtml to properly implement this DI.

- ER Project Quality Management Plan
- LANL-ER-SOP-1.04, Sample Control and Field Documentation
- LANL-ER-SOP-1.02, Sample Container and Preservation
- LANL-ER-SOP-1.05, Field Quality Control Samples
- LANL-ER-QP-3.02, Lessons Learned
- The work plan, sampling and analysis plan, voluntary corrective action plan, interim action plan, or other sampling event planning document that defines the sampling event that you will execute.

10.0 ATTACHMENTS

Attachment A: Completing the SMO Analytical Order and Field Paperwork Request Process Flow Diagram (1 page)

Attachment B: Worksheet 1, General Request Info (1 page)

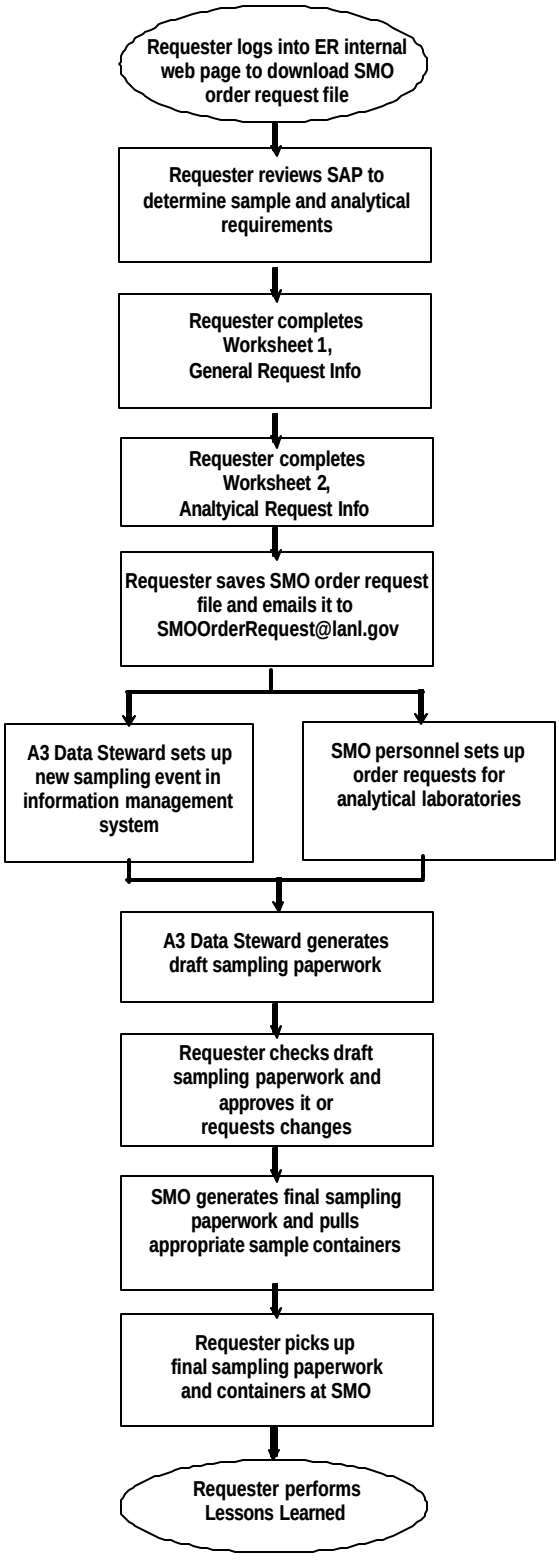
Attachment C: Worksheet 2, Analytical Request Info (3 pages)

Attachment D: Worksheet 3, Field Code Values to Print (1 page)

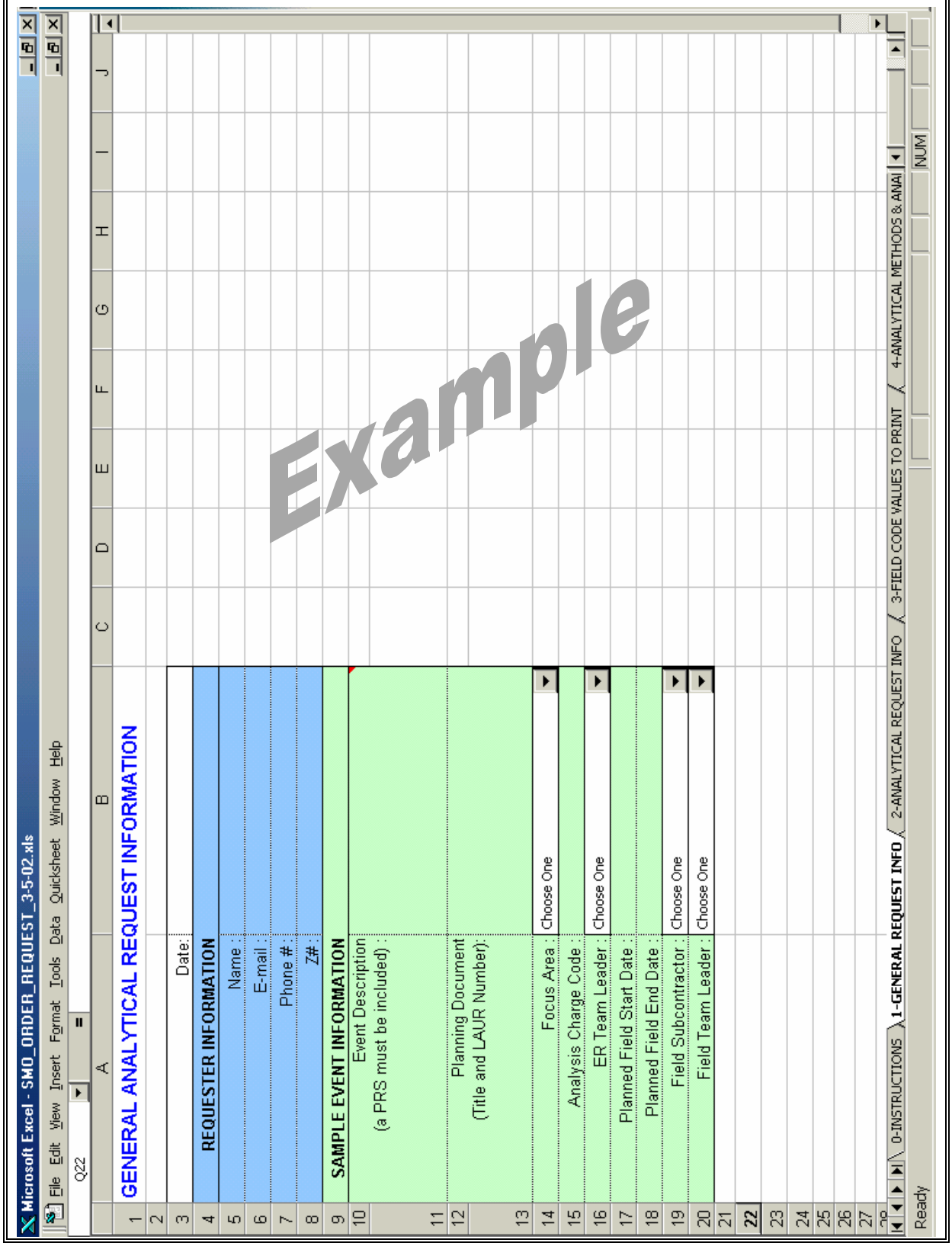
Attachment E: Worksheet 4, Analytical Methods & Analytes (1 page)

Attachment F: Sampling Paperwork Approval Form (1 page) located at http://erinternal.lanl.gov/Quality/user/forms.asp

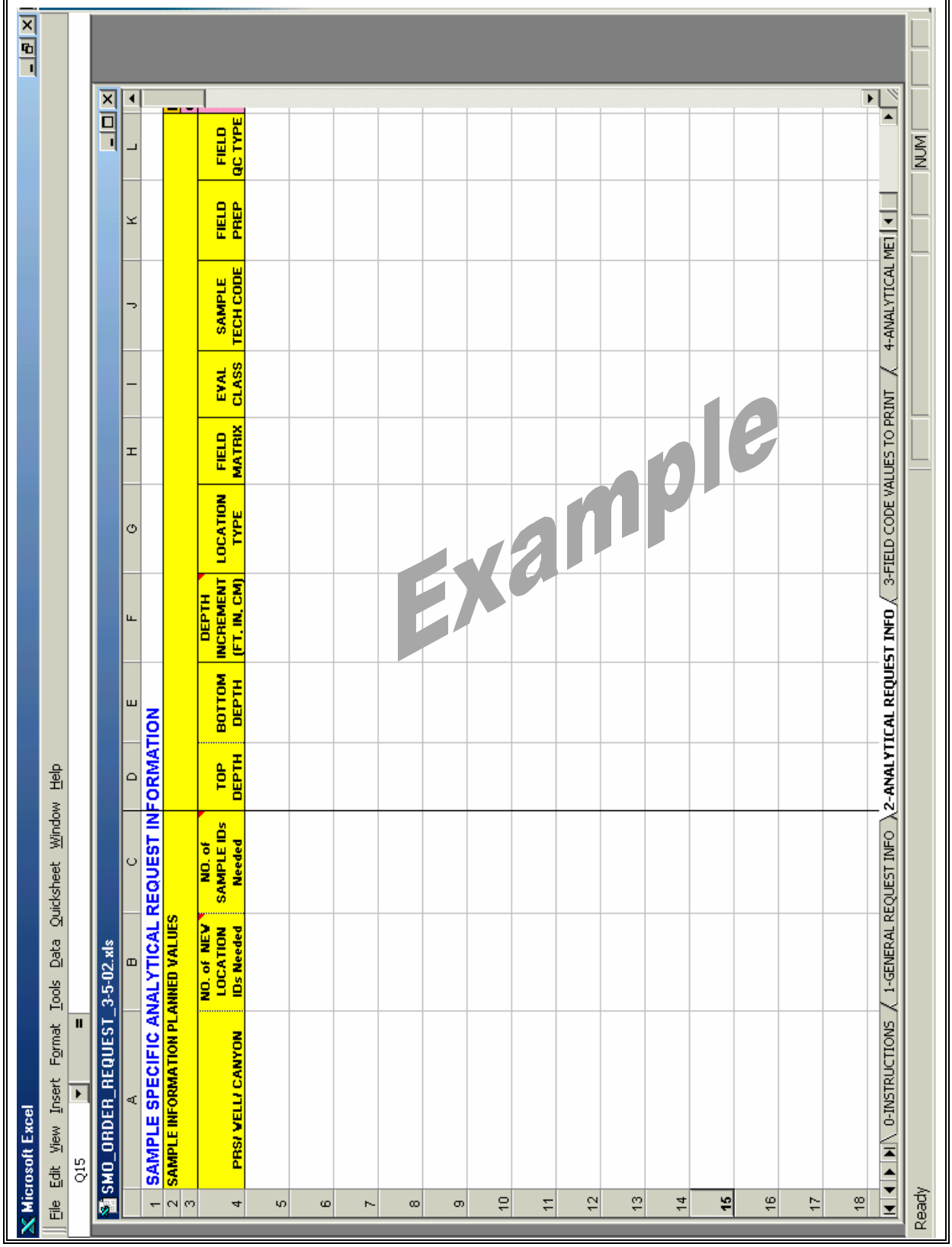
Completing the SMO Analytical Order/Field Paperwork Request Process Flow Diagram



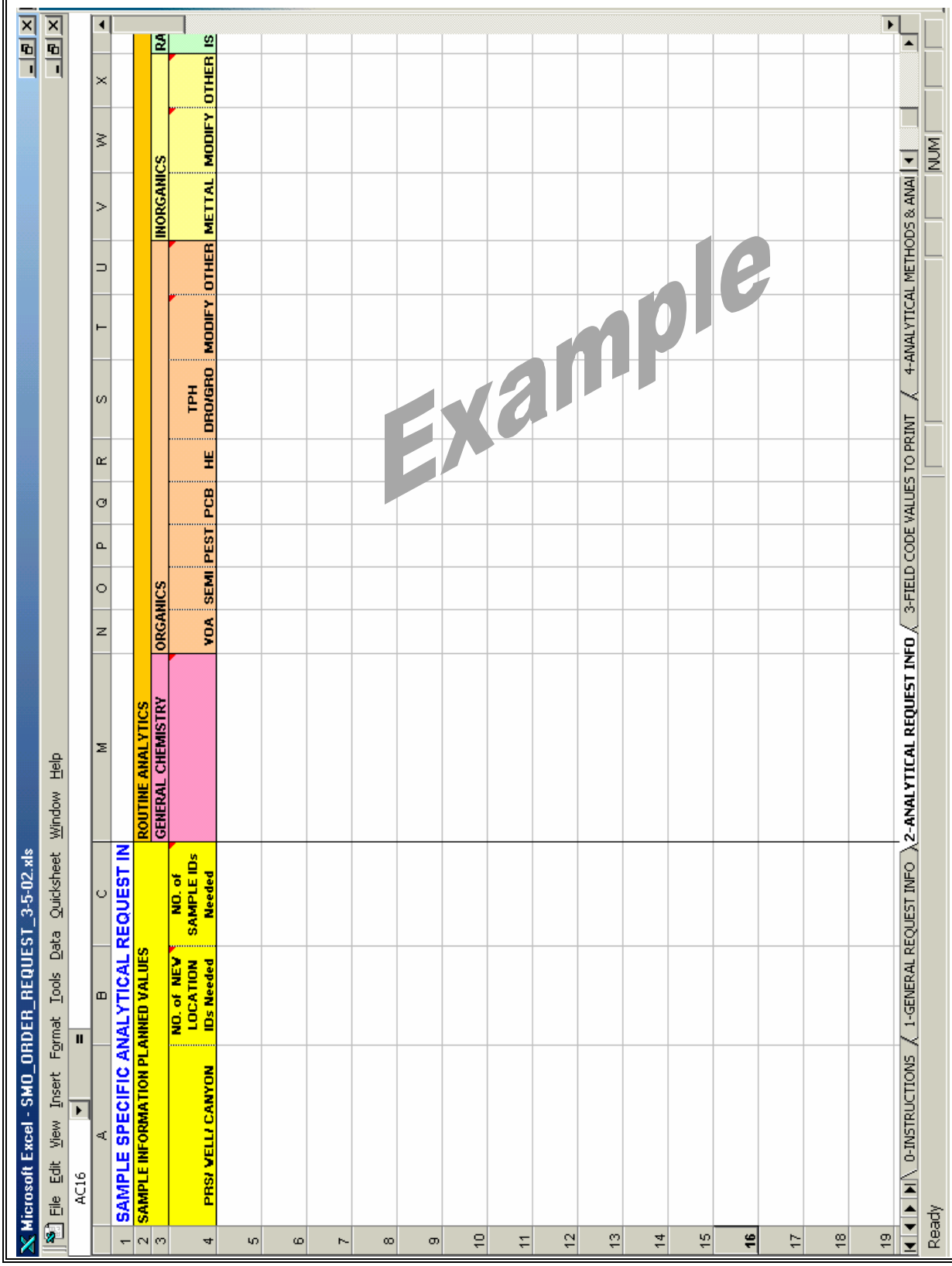
Worksheet 1-GENERAL REQUEST INFO



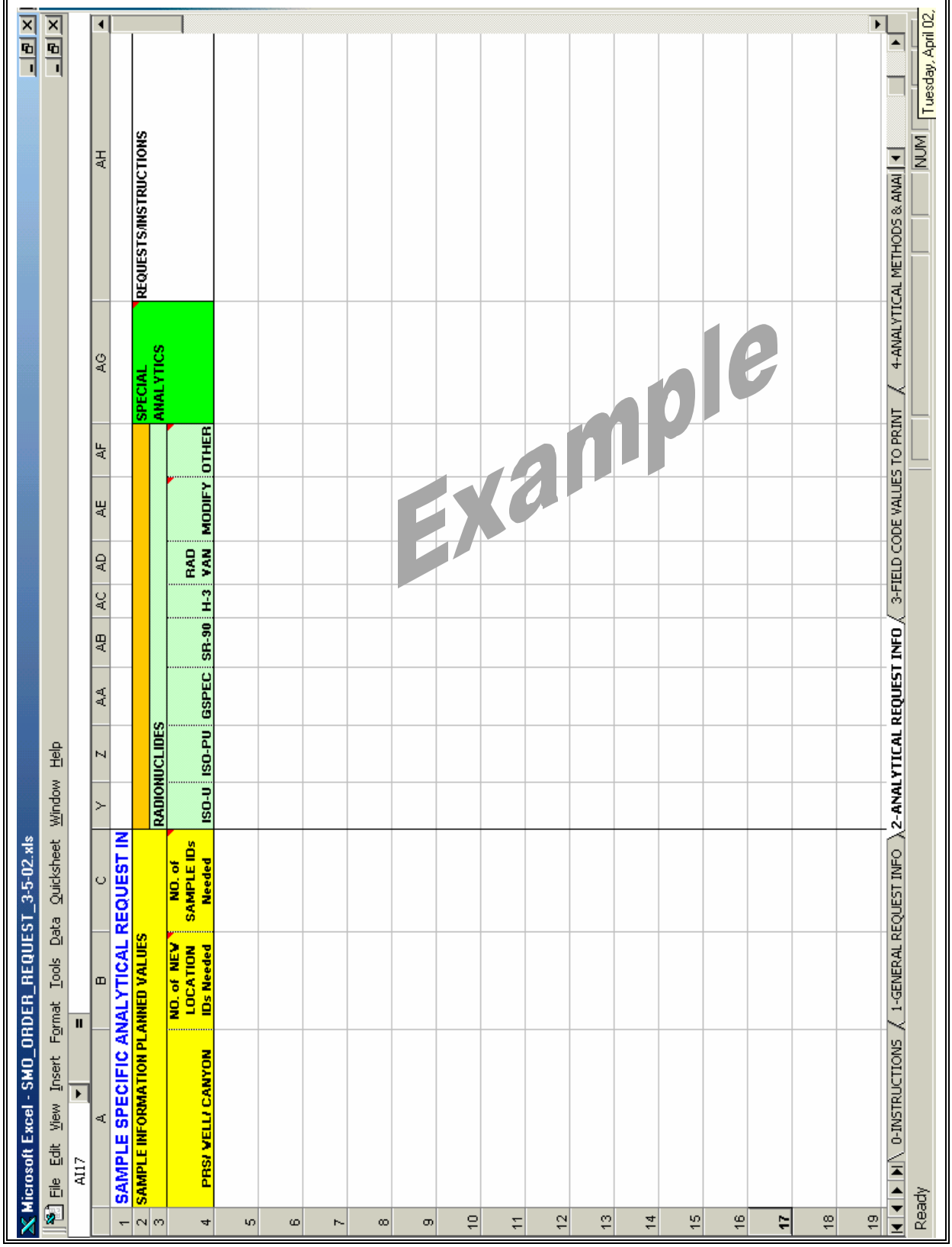
Worksheet 2-ANALYTICAL REQUEST INFO (p. 1 of 3)



Worksheet 2-ANALYTICAL REQUEST INFO (cont'd p. 2 of 3)



Worksheet 2-ANALYTICAL REQUEST INFO (cont'd p. 3 of 3)



Worksheet 3-FIELD CODE VALUES TO PRINT

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	LOCATION_TYPE			EVAL_CLASS			SAMPLE_TECH_CODE						
2	code	description		code	description		code	description					
3		Choose One			Choose One			Choose One					
4	AMS	Air Monitoring Station		AH	Soil A Horizon		AM	Air Monitoring					
5	BH	Borehole		ALLH	Soil All Data		APS	Automated Pump Sampler					
6	GENERIC	Generic		BH	Soil B Horizon		ARD	Air Rotary Drilling					
7	MON	Monitoring Well		CH	Soil C Horizon		BA	Bailer					
8	NOC	Well Not Otherwise Classified		FILL	Fill Material, Undifferentiated		BP	Bladder Pump					
9	OUT	Outfall		NA	Media Code Not Applicable for type of sample		CA	Canister Sampling					
10	SPR	Spring		QAL	Quaternary Alluvium		CBS	Core Barrel Sampler					
11	SUP	Supply Well		QBO	Quaternary Otowi Member of the Bandelier Tuff, Ignimbrite		CP	Cone Penetrometer					
12	UNK	Unknown		QBOG	Quaternary Otowi Member of the Bandelier Tuff, Gaaje Pumice Bed		CS	Coliwasa Sampler					
13	WCS	Watercourse		QBT1G	Quaternary Tshirege Member of the Bandelier Tuff 1G		DC	Direct Container Grab Sampling					
14				QBT1V	Quaternary Tshirege Member of the Bandelier Tuff 1V		DIS	Depth Integrated Sampler					
15	FIELD_MATRIX			QBT2	Quaternary Tshirege Member of the Bandelier Tuff 2		DP	Discharge Pipe or Faucet					
16	code	description		QBT3	Quaternary Tshirege Member of the Bandelier Tuff 3		EM	EMFlux Sampler					
17		Choose One		QBT4	Quaternary Tshirege Member of the Bandelier Tuff 4		GC	Gravity Corer					
18	A	Animal		QBTT	Quaternary Tshirege Member of the Bandelier Tuff, Tsankawi Pumice Bed		GSP	Gear Driven submersible pump					
19	ASH	Volcanic Ash		QCT	Quaternary Cerro Toledo Interval		HA	Hand Auger and Thin-Wall Tube Sampler					
20	D	Debris		SED	Alluvial Sediment		HC	Hand Corer					
21	EM	Engineered Material		TA	Old Alluvium		HSA	Hollow Stem Auger					
22	F	Filter, total		TCB	Cerros del Rio volcanics		M	Manual Collection					
23	GAS	Gas		TP	Puye Formation		PGS	Ponar Grab Sampler					
24	LIQ	Liquids other than water or oil		TPT	Totavi Lentil		PP	Peristaltic Pump					
25	NA	Not Applicable		TSFB	Santa Fe Group Basalt		PVS	Pressure-Vacuum Soil Water Sampler					
26	NASH	Nongeologic Ash		TSFU	Santa Fe Group Sediments, Undifferentiated		RSP	Reciprocating piston-type submersible pump					
27	NSED	Nongeologic Sediment		TT	Tschicoma Formation		SP	Split Spoon and Shelby Tube Samplers					
28	OIL	Oil		WGA	Groundwater, alluvial		SS	Spade and Scoop					
29	OTH	Other		WGI	Groundwater, intermediate depth perched		SSS	Single Stage Sampler for Surface Water Run-off					
30	PA	Filter Particulates and/or adsorbates		WGR	Groundwater, regional		ST	Scoop or Trowel					
31	R	Rock		WGS	Groundwater, springs		SYR	Syringe samplers					
32	S	Soil		WP	Water, Precipitation		TD	Transfer Device for Grab Samples					
33	SED	Geologic Sediment		WT	Storm water		TFS	Thief Sampler					
34	SLD	Sludge, Dry		WS	Surface Water		TRS	Trier Sampler					
35	SLW	Sludge, Wet					VOST	Volatile Organic Sampling Train					
36	UA	Unassigned		COMPOSITE_TYPE			WB	Weighted Bottle					
37	UNK	Unknown		code	description		WES	WestBay Sampler					
38	V	Vegetation			Choose One		WW	Wipes					
39	W	Water		NA	Not a composite sample								
40	WG	Ground Water		SC	Spatial, Composited from more than one location		SAMPLE_USAGE						
41	WP	Wipe (Including Swipes)		TC	Time, Composited over time		code	description					
42	WS	Surface Water		VC	Vertical, Composited from more than one depth at one location			Choose One					
43	WT	Storm Water					BASE	Baseline Evaluation					
44				FIELD_PREP			BKGD	Background Evaluation					
45	FIELD_QC_TYPE			code	description		CLN	Cleanup					
46	code	description			Choose One		HS	H&S Evaluation					
47		Choose One		CRUSH	Crushed		INV	Investigation					
48	CO	Collocated		F	Filtered		PE	Performance Evaluation					
49	FB	Field Blank		NA	Not Applicable		QC	QC Evaluation					
50	FD	Field Duplicate		SV	Sieved		SCR	Screening					
51	FPR	Field Prepared Reagent		UF	Unfiltered		WST	Waste Classification					
52	FPS	Field Prepared Spike		UNK	Unknown								
53	FR	Field Rinsate											
54	FS	Field Split											
55	FTB	Field Trip Blank											
56	FTR	Field Triplicate											
57	NA	Not Applicable											

Worksheet 4-ANALYTICAL METHODS & ANALYTES

Microsoft Excel - SMO_ORDER_REQUEST_3-5-02.xls

File Edit View Insert Format Tools Data Quicksheet Window Help

B457 = ISOU

	A	B	C	D	E	F	G	H
1	Suite Type	Order Code	Analytes with order code	Test Methods	Water Container and Preservative	Soil Container and Preservative	Water CRDL (mg/L)	Soil CRDL (mg/Kg)
2	Organic						ug/L	mg/Kg
3	Organic	Dibromoethane[1,2-]	Dibromoethane[1,2-]	8011	2 x 40 mL VOA vial/ HCL pH < 2	4 oz(AG)/Ice	0.2	
4	Organic	Dibromo-3-chloropropane[1,2-]	Dibromo-3-chloropropane[1,2-]	8011			0.2	
5	Organic	TPH	TPH-GRO	8015M	2 x 40 mL VOA vial/ HCL pH < 2	4 oz(AG)/Ice	10	1
6	Organic	TPH	TPH-DRO	8015M	2 x 1 L (A) glass	8 oz (G)/Ice	10	1
7	Organic	TPH	TPH-Unknown	8015M	2 x 1 L (A) glass	8 oz (G)/Ice	10	1
8	Organic	BTEX	Benzene	8021B	2 x 40 mL VOA vial/ HCL pH < 2	4 oz(AG)/Ice	1	0.001
9	Organic	BTEX	Chlorobenzene	8021B			1	0.001
10	Organic	BTEX	Dichlorobenzene[1,2-]	8021B			1	0.001
11	Organic	BTEX	Dichlorobenzene[1,3-]	8021B			1	0.001
12	Organic	BTEX	Dichlorobenzene[1,4-]	8021B			1	0.001
13	Organic	BTEX	Ethylbenzene	8021B			1	0.001
14	Organic	BTEX	Toluene	8021B			1	0.001
15	Organic	BTEX	Xylene[1,2-]	8021B			1	0.001
16	Organic	BTEX	Xylene[1,3-]	8021B			1	0.001
17	Organic	BTEX	Xylene[1,4-]	8021B			1	0.001
18	Organic	PEST	Aldrin	8081A	2 x 1 L (A) glass	8 oz (G)/Ice	0.05	0.0017
19	Organic	PEST	BHC[alpha-]	8081A			0.05	0.0017
20	Organic	PEST	BHC[beta-]	8081A			0.05	0.0017
21	Organic	PEST	BHC[delta-]	8081A			0.05	0.0017
22	Organic	PEST	BHC[gamma-]	8081A			0.05	0.0017
23	Organic	PEST	Chlordane (Technical Grade)	8081A				
24	Organic	PEST	Chlordane[alpha-]	8081A			0.05	0.0017
25	Organic	PEST	Chlordane[gamma-]	8081A			0.05	0.0017
26	Organic	PEST	DDD[4,4'-]	8081A			0.1	
27	Organic	PEST	DDE[4,4'-]	8081A			0.1	
28	Organic	PEST	DDT[4,4'-]	8081A			0.1	
29	Organic	PEST	Dieldrin	8081A			0.1	
30	Organic	PEST	Endosulfan I	8081A			0.05	0.0017
31	Organic	PEST	Endosulfan II	8081A			0.1	
32	Organic	PEST	Endosulfan Sulfate	8081A			0.1	
33	Organic	PEST	Endrin	8081A			0.1	
34	Organic	PEST	Endrin Aldehyde	8081A			0.1	
35	Organic	PEST	Endrin Ketone	8081A			0.1	
36	Organic	PEST	Heptachlor	8081A			0.05	0.0017
37	Organic	PEST	Heptachlor Epoxide	8081A			0.05	0.0017
38	Organic	PEST	Methoxychlor[4,4'-]	8081A			0.5	0.017
39	Organic	PEST	Toxaphene (Technical Grade)	8081A			5	0.17
40	Organic	PCB	Arocolor-1016	8082	2 x 1 L (A) glass	8 oz (G)/Ice	1	0.033

1-GENERAL REQUEST INFO / 2-ANALYTICAL REQUEST INFO / 3-FIELD CODE VALUES TO PRINT / 4-ANALYTICAL METHODS & ANALYTES

Filter Mode NUM

Example

Sampling Paperwork Approval Form

This form documents the approval of the sampling paperwork generated from the following request:

Date:	
REQUESTER INFORMATION	
Name:	
E-mail:	
Phone #:	
Z#:	
SAMPLE EVENT INFORMATION	
Event Description:	
Focus Area:	
Analysis Charge Code:	
ER Team Leader:	
Planned Field Start Date:	
Planned Field End Date:	
Field Subcontractor:	
Field Team Leader:	

The SMO and A3 personnel received the above requ[illegible]ving [illegible]urre[illegible] sampling event generated, 2) sample orders generated, and 3) draft sampling pa[illegible] pre[illegible]ed.

Event Num[illegible]		
Draft sampling paperwork w[illegible]ene[illegible]ated by (A3 D[illegible] Stewa[illegible]		
Dr[illegible]pling orde[illegible]enerat[illegible]y Perso[illegible]		
Dra[illegible] paperw[illegible]ovided to th[illegible]er (listed a[illegible]e) [illegible]eview on:		
R[illegible]ster, ar[illegible]any [illegible]anges or additions t[illegible] dr[illegible]pling paperwork requ[illegible] (circle one)?	YES ☐	NO ☐
If [illegible]lease summarize the changes that are necessary and please contact the A3 data stewa[illegible] that generated the draft sampling paperwork to discuss the required corrections:		
If not, please sign:		

A signature indicates approval of the draft sampling paperwork and results in the generation of the final sampling paperwork to match the reviewed, draft-sampling paperwork.

ER-DI-4.11, R0	**Los Alamos** Environmental Restoration Project